

WATER-SPOUTS.

Mr. James Mainwaring, observer on the s. s. "Athos," Capt. Horatio Law, commanding, reports having observed several water-spouts off the east end of Jamaica, W. I. on May 18, 1887.

Capt. W. N. Aldrich, of the schooner "Comet," reports water-spouts as follows: May 18th, N. 22° 08', W. 94° 40', one

small one; 28th, N. 25° 07', W. 86° 05', three within half an hour; 29th, N. 24° 15', W. 85° 25', two in northeast and one in southeast.

Captain Garvie, of the s. s. "Caledonia," reports having observed a large water-spout in N. 38° 30', W. 17° 0', on May 29th.

COTTON REGION REPORTS.

In the following table are given the means of the maximum and minimum temperatures, and the average rainfall for the cotton-belt districts during the month. For the purpose of comparison the means for the four preceding years are also given. The district of Wilmington, only, shows an excess of precipitation, 1.10 inches above the normal; all the other districts have deficiencies, ranging from 0.22 inch for the district of Mobile to 2.81 inches for the district of Memphis. The district of Wilmington shows the greatest average precipitation for the month, 4.81 inches, and the district of Memphis the least, 1.88 inches.

The means of the maximum and minimum temperatures are in all districts above the normal; the departures of the maximum temperature ranging from 2° 1 for the district of Savannah to 6° 4 for the district of Memphis, and the departures of the minimum temperature from 0° 4 for the district of Charleston to 5° 1 for the district of Little Rock. The district of Galveston shows the highest maximum temperature for the month, 101° 0, and the district of Vicksburg the lowest minimum temperature, 30° 0.

Temperature and rainfall data for the cotton districts, May.

Districts.	Rainfall.			Temperature.								Extremes for May, 1887.	
	Average for May of four preceding years.	Average for May, 1887.	Departures.	Maximum.			Minimum.						
				Mean for May of four preceding years.	Mean for May, 1887.	Departures.	Mean for May of four preceding years.	Mean for May, 1887.	Departures.				
									Max.	Min.			
	Inch.	Inch.	Inch.	°	°	°	°	°	°	°	°	°	°
New Orleans...	5.46	4.13	- 1.33	83.7	88.3	+ 4.6	62.6	63.6	+ 1.0	100	44		
Savannah.....	3.12	2.44	- 0.68	85.5	87.6	+ 2.1	62.0	53.6	+ 1.3	100	43		
Charleston.....	3.46	3.55	+ 0.09	83.5	86.3	+ 2.8	59.4	59.8	+ 0.4	94	44		
Atlanta.....	3.02	2.65	- 0.37	80.3	85.2	+ 4.9	56.5	59.4	+ 2.9	98	44		
Wilmington...	3.71	4.81	+ 1.10	80.9	83.1	+ 2.2	56.1	60.0	+ 3.9	97	43		
Memphis.....	4.69	1.88	- 2.81	79.9	85.7	+ 5.8	56.4	60.5	+ 4.1	97	40		
Galveston.....	6.53	4.53	- 2.00	83.5	87.2	+ 3.7	62.1	63.5	+ 1.4	101	38		
Vicksburg.....	5.79	3.95	- 1.84	82.0	87.4	+ 5.4	61.1	61.5	+ 0.4	99	30		
Montgomery...	3.23	2.88	- 0.35	83.5	86.8	+ 3.3	58.8	63.0	+ 4.2	97	46		
Augusta.....	3.17	2.52	- 0.65	83.3	86.6	+ 3.3	58.8	59.9	+ 1.1	97	41		
Little Rock.....	5.65	4.05	- 1.60	79.6	83.9	+ 4.3	55.3	60.4	+ 5.1	97	35		
Mobile.....	3.96	3.74	- 0.22	82.5	87.8	+ 5.3	60.1	62.2	+ 2.1	98	43		

INLAND NAVIGATION.

STATE OF WATER IN RIVERS AND HARBORS.

In the following table are shown the danger-points at the various river stations and the highest and lowest depths for May, 1887, with the dates of occurrence, and the monthly ranges:

Heights of rivers above low-water mark, May, 1887.
[Expressed in feet and tenths.]

Stations.	Danger-point on gauge.	Highest water.		Lowest water.		Monthly range.
		Date.	Height.	Date.	Height.	
Red River:						
Shreveport, La.....	29.9	21, 22, 23	16.7	2	2.7	14.0
Arkansas River:						
Fort Smith, Ark.....	22.0	7	9.0	16, 17	3.2	5.8
Little Rock, Ark.....	23.0	6	16.5	3	4.4	12.1
Missouri River:						
Omaha, Nebr.....	18.0	24	9.8	2 to 8	7.6	2.2
Leavenworth, Kans.....	20.0	25	12.3	8	9.0	3.3
Mississippi River:						
Saint Paul, Minn.....	14.5	1, 2	5.8	31	3.4	2.4
La Crosse, Wis.....	24.0	1	10.3	31	5.0	5.3
Dubuque, Iowa.....	16.0	1	13.7	31	5.8	7.9
Davenport, Iowa.....	15.0	1	11.1	31	4.3	6.8
Keokuk, Iowa.....	14.0	2, 3, 4	11.0	31	4.7	6.3
Saint Louis, Mo.....	32.0	7	18.4	25	14.6	3.8
Cairo, Ill.....	40.0	2	39.3	31	17.6	21.7
Memphis, Tenn.....	34.0	5	31.6	31	15.2	16.4
Vicksburg, Miss.....	41.0	14, 15	38.2	31	25.9	12.3
New Orleans, La.....	13.0	19	12.5	31	10.2	2.3
Ohio River:						
Pittsburg, Pa.....	22.0	1	10.7	23	2.2	8.5
Cincinnati, Ohio.....	50.0	2	35.0	31	9.8	25.2
Louisville, Ky.....	25.0	1, 2, 3	12.4	31	5.6	6.8
Cumberland River:						
Nashville, Tenn.....	40.0	3	20.3	30	3.9	16.4
Tennessee River:						
Chattanooga, Tenn.....	33.0	1	6.6	22, 23, 24	4.6	2.0
Monongahela River:						
Pittsburg, Pa.....	29.0	1	10.7	23	2.2	8.5
Savannah River:						
Augusta, Ga.....	32.0	13	8.8	24, 30, 31	6.0	2.8
Sacramento River:						
Sacramento, Cal.....		1	20.5	16, 17, 18	18.0	2.5
Willamette River:						
Portland, Oregon.....		31	21.2	1	10.5	10.7

Hudson River.—Albany, N. Y.: from the 17th of April until the 1st of the current month the river rose steadily, and at

noon of the latter date was thirteen feet above low-water mark. On the 2d, 3d, and 4th the water receded slowly, but rose slightly on the 5th.

Mississippi River.—Cairo, Ill.: the river at this point reached its highest stage, 39.3 feet above low water, on the 2d; from the 2d until the 18th it fell slowly to 25.0 feet; from the 18th to 21st it rose .4 foot; from the 21st to the end of the month it fell steadily, being on the 31st 17.6 feet above low-water mark.

Cumberland River.—Nashville, Tenn.: the river was at its greatest height on the 3d. After the 3d it fell steadily, and at the end of the month was only 3.9 feet above low-water mark.

Lake Superior.—Duluth, Minn.: the lake at this port was filled with broken ice until the 9th, when it moved out before a northwesterly wind. Navigation opened on the 6th; on this date the propeller "Spokane" arrived from Buffalo, N. Y., and the "Jas. Fisk, jr." departed.

Marquette, Mich.: on the 1st the broken ice in the harbor was driven out by a strong southwest wind. On the 2d several vessels left for ports on the lower lakes.

Fort Totten, Dak., 7th: the navigation on Devil's Lake opened to-day. The steamer "Minnie H.," Capt. E. E. Herrman, made the first trip of the season.

Fort Smith, Ark., 31st: the river has remained higher this month than it has been since January. Copious rains fell both at this point and above here on the river.

FLOODS.

Augusta, Me.: at the beginning of the month the rivers in Maine, swollen by the heavy rains of the last two days of April and the consequent melting of the large amount of snow in the forests, were unusually high. On the 1st the Kennebec and its branches were at flood height; in the vicinity of Augusta the river was about twelve feet above its average height, and flowing swiftly. All cellars and basements in the lower part of the city were flooded. In the surrounding country great damage was done; many bridges were carried away, roads